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BURTON LAKE, RABUN COUNTY, GEORGIA

Pacific Northwest Environmental Research Laboratory

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16. ABSTRACT
Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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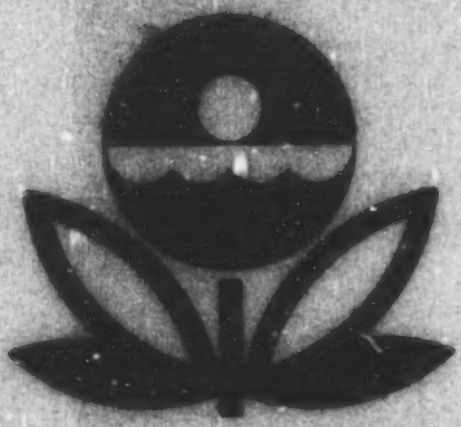

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REPORT
ON
BURTON LAKE
RABUN COUNTY
GEORGIA
EPA REGION IV
WORKING PAPER No. 285

WITH THE COOPERATION OF THE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
AND THE
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JUNE, 1975

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FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to fresh water lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's fresh water lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENT

The staff of the National Eutrophication Survey (Office of Research & Development, U. S. Environmental Protection Agency) expresses sincere appreciation to the Georgia Department of Natural Resources for professional involvement and to the Georgia National Guard for conducting the tributary sampling phase of the Survey.

Joe D. Tanner, Commissioner of the Department of Natural Resources; J. Leonard Ledbetter, Director of the Environmental Protection Division; Ralph S. Howard, Jr., Environmental Affairs Coordinator; Gene B. Welsh, Chief of the Water Protection Branch; Edward T. Hall, Jr., Unit Coordinator; and Broughton A. Caldwell, R. Marshall Gaddis, William D. Kennedy, and Kenneth W. Martin, Environmental Specialists, provided invaluable lake documentation and counsel during the Survey, reviewed the preliminary lake reports, and provided critiques most useful in the preparation of this Working Paper series.

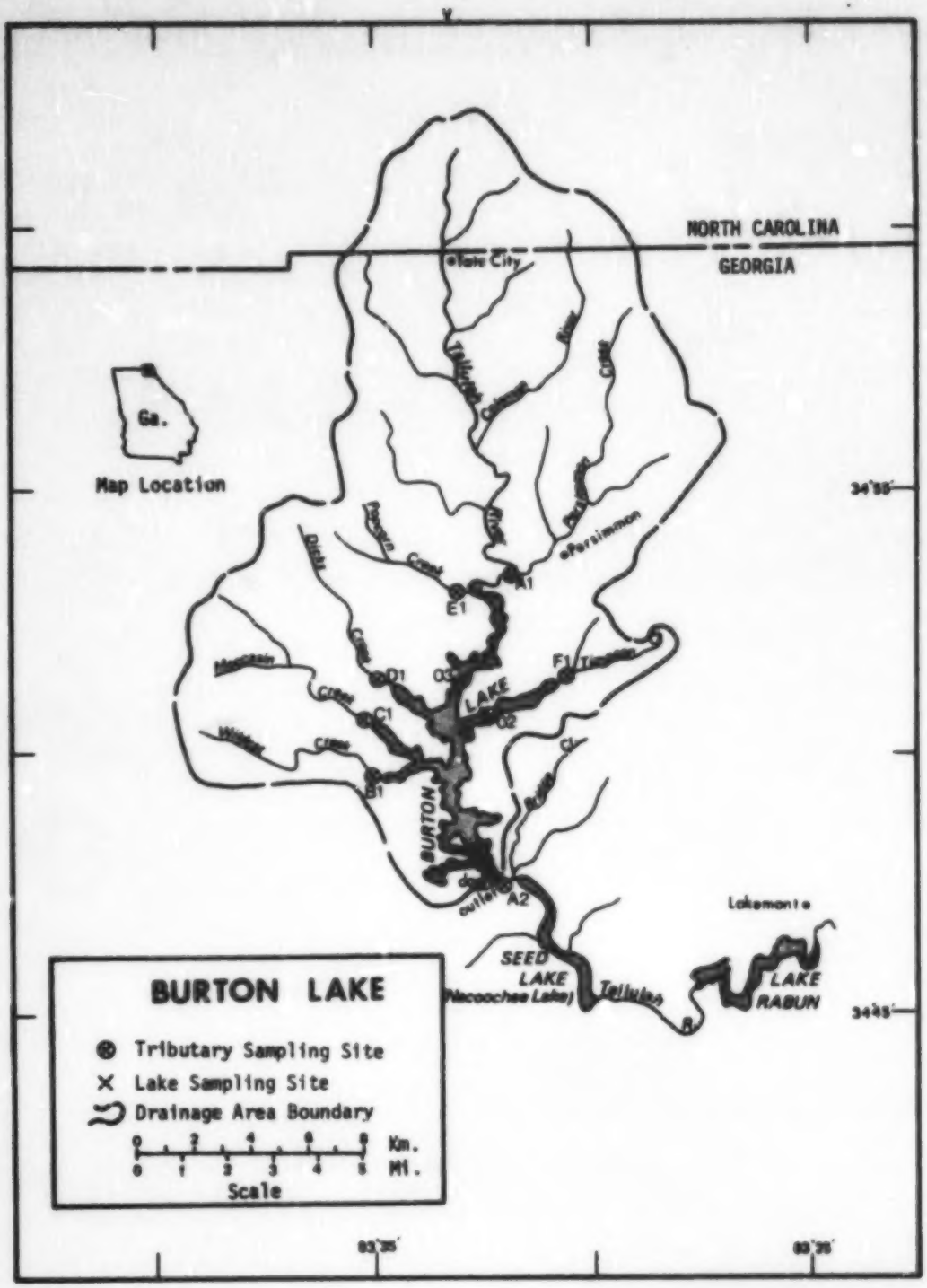
Major General Joel B. Paris, III, then the Adjutant General of Georgia, and Project Officer Lt. Colonel John R. Ranier, who directed the volunteer efforts of the Georgia National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF GEORGIA

LAKE NAME	COUNTY
Allatoona	Bartow, Cherokee, Cobb
Blackshear	Crisp, Dooly, Lee, Sumpter, Worth
Blue Ridge	Fannin
Burton	Rabun
Chatuge	Towns, GA; Clay, NC
Clark Hill	Columbia, Elbert, Lincoln, McDuffie, Wilks, GA; Abbeville, McCormick, SC
Harding	Harris, GA; Chambers, Lee, AL
Hartwell	Franklin, Hart, Stephens, GA; Anderson, Oconee, Pickens, SC
High Falls	Butts, Lamar, Monroe
Jackson	Butts, Jasper, Newton
Nottely	Union
Seminole	Decatur, Seminole, GA; Jackson, FL
Sidney Lanier	Dawson, Forsyth, Gwinnett, Hall, Lumpkin
Sinclair	Baldwin, Hancock, Putnam
Walter F. George	Clay, Quitman, Stewart, GA; Barbour, Henry, Russell, AL


NORTH CAROLINA
GEORGIA
Ga.
Map Location
Talkeetna Creek
Persimmon
Persimmon Creek
Pocosin Creek
Ditch
Mossey Creek
Wilson Creek
A1
E1
D1
C1
B1
F1
Timmons
LAKE
BURTON
outlet
A2
Lakemont
SEED LAKE
(Nocoochee Lake)
Telluloa
LAKE RABUN
34°55'
34°45'
83°35'
83°25'
BURTON LAKE
Tributary Sampling Site
Lake Sampling Site
Drainage Area Boundary
Km.
Mi.
Scale

BURTON LAKE*

STORET NO. 1318

I. CONCLUSIONS

A. Trophic Condition:

Survey data indicate that Burton Lake is mesotrophic. It ranked second in overall quality when all 14 Georgia lakes samples in 1973 were compared using a combination of six parameters**. None of the lakes had less median total phosphorus, dissolved phosphorus, and inorganic nitrogen; one lake had less mean chlorophyll a; and none had greater mean Secchi disc transparency.

Survey limnologists did not observe algal concentrations or macrophytes. However, hypolimnetic dissolved oxygen was depressed to less than 1.0 mg/l at all stations in September.

B. Rate-Limiting Nutrient:

The algal assay results indicate that Burton Lake was phosphorus limited at the time the sample was collected (06/28/73). The lake data indicate phosphorus limitation in June and September, 1973, also; i.e., the mean inorganic nitrogen to orthophosphorus ratios were 18 to 1 or greater.

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* Table of metric conversions--Appendix A.
** See Appendix B.

C. Nutrient Controllability:

1. Point sources--No municipal wastewater treatment plants discharged to Burton Lake during the sampling year; however, the Burton Lake State Fish Hatchery discharged to Moccasin Creek (Anonymous, 1972). Nutrient contributions from this source were not measured but probably were not significant (see below).

Septic tanks serving permanent and seasonal dwellings on the lakeshore were estimated to have contributed 4.8% of the total phosphorus load to the lake, but a shoreline survey would be necessary to determine the actual contribution of these sources.

The present loading rate of 0.40 $g/m^2/yr$ is less than the rate proposed by Vollenweider (Vollenweider and Dillon, 1974) as "permissible"; i.e., an oligotrophic rate (see page 14). The existing loading rate should result in continuance of the high quality of Burton Lake.

2. Non-point sources--The phosphorus load from non-point sources, including precipitation amounted to 95.2% of the total reaching Burton Lake during the sampling year. The Tallulah River contributed 46.9%, Timpson Creek supplied 15.7%, Moccasin Creek contributed 7.0%, and the remaining three tributaries supplied a total of 9.5%. The contributions from ungaged tributaries were estimated to have been 11.7% of the total load.

Moccasin Creek was sampled just downstream from the overflows of the fish-rearing raceways of the Burton Lake State Fish Hatchery (Caldwell, 1975). Therefore, the phosphorus load measured in the creek included that resulting from the hatchery operation. However, the calculated phosphorus export rate of Moccasin Creek was only 15 kg/km^2/yr, and this is comparable to the mean export rate of 13 kg/km^2/yr of the other five sampled tributaries (see page 12). On this basis, it is believed that the hatchery phosphorus contribution was not significant during the Survey sampling year.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

A. Lake Morphometry†:

1. Surface area: 11.23 kilometers^2.
2. Mean depth: 11.9 meters.
3. Maximum depth: >30.5 meters.
4. Volume: 133.637 x 10^6 m^3.
5. Mean hydraulic retention time: 161 days.

B. Tributary and Outlet:
(See Appendix C for flow data)

1. Tributaries -

Name	Drainage area (km^2)	Mean flow (m^3/sec)
Tallulah River	147.6	5.0
Wildcat Creek	16.1	0.6
Moccasin Creek	20.7	0.7
Dicks Creek	17.9	0.6
Popcorn Creek	15.0	0.5
Timpson Creek	27.7	0.9
Minor tributaries & immediate drainage -	41.7	1.3
Totals	286.7	9.6

2. Outlet -

Tallulah River	297.9**	9.6

C. Precipitation***:

1. Year of sampling: 229.8 centimeters.
2. Mean annual: 176.2 centimeters.

† Martin and Hanson, 1966.
* For limits of accuracy, see Working Paper No. 175, "...Survey Methods, 1973-1976".
** Total area adjusted to equal sum of the subdrainage areas plus the area of the lake.
*** See Working Paper No. 175.

III. LAKE WATER QUALITY SUMMARY

Burton Lake was sampled three times during the open-water season of 1973 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from three stations on the lake and from a number of depths at each station (see map, page i). During each visit, a single depth-integrated (4.6 m to surface) sample was composited from the three stations for phytoplankton identification and enumeration; and during the first visit, a single 18.9-liter depth-integrated sample was composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll a analysis. The maximum depths sampled were 30.5 meters at station 1, 14.3 meters at station 2, and 15.2 meters at station 3.

The lake sampling results are presented in full in Appendix D and are summarized in the following table.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR BURTON LAKE
STORET CODE 1318

PARAMETER	1ST SAMPLING (6/28/73) 3 SITES RANGE	MEAN	MEDIAN	2ND SAMPLING (9/18/73) 3 SITES RANGE	MEAN	MEDIAN	3RD SAMPLING (11/10/73) 3 SITES RANGE	MEAN	MEDIAN
TEMP (C)	12.8 - 27.0	21.3	21.6	15.2 - 24.5	21.0	21.7	14.7 - 15.9	15.3	15.4
DISS OXY (MG/L)	2.1 - 10.1	7.2	7.7	0.1 - 8.0	3.9	3.2	7.2 - 8.4	7.9	7.9
CNDCTVY (MCROMO)	50. - 50.	50.	50.	14. - 24.	17.	16.	17. - 20.	18.	18.
PH (STAND UNITS)	6.3 - 7.1	6.7	6.5	5.3 - 7.1	5.9	5.8	6.3 - 6.5	6.4	6.4
TOT ALK (MG/L)	10. - 13.	10.	10.	10. - 13.	10.	10.	10. - 11.	10.	10.
TOT P (MG/L)	0.006 - 0.014	0.008	0.009	0.004 - 0.024	0.009	0.008	0.005 - 0.010	0.007	0.006
ORTHO P (MG/L)	0.002 - 0.004	0.002	0.002	0.004 - 0.00?	0.006	0.006	****** - **********		
NO2+NO3 (MG/L)	0.040 - 0.080	0.056	0.050	0.020 - 0.100	0.040	0.030	0.020 - 0.030	0.022	0.020
AMMONIA (MG/L)	0.050 - 0.170	0.076	0.060	0.040 - 0.200	0.069	0.040	0.040 - 0.060	0.048	0.050
KJEL N (MG/L)	0.200 - 0.600	0.294	0.300	0.200 - 0.800	0.373	0.400	0.200 - 0.300	0.208	0.200
INORG N (MG/L)	0.100 - 0.230	0.132	0.120	0.060 - 0.240	0.109	0.080	0.060 - 0.090	0.069	0.070
TOTAL N (MG/L)	0.240 - 0.670	0.351	0.340	0.230 - 0.820	0.413	0.430	0.220 - 0.330	0.229	0.220
CHLRPYL A (UG/L)	2.0 - 5.7	3.5	2.8	2.4 - 3.7	3.0	3.0	1.3 - 2.1	1.7	1.6
SECCHI (METERS)	2.5 - 3.2	2.8	2.7	2.8 - 3.0	2.9	2.8	3.7 - 5.5	4.7	5.0

B. Biological characteristics:

1. Phytoplankton -

Sampling Date	Dominant Genera	Algal units per ml
06/28/73	1. Flagellates	103
	2. Peridinium	52
	3. Mallomonas	30
	4. Oscillatoria	30
	5. Dinobryon	15
	Other genera	29
	Total	259
09/18/73	1. Gloeocystis	139
	2. Kirchneriella	123
	3. Cyclotella	92
	4. Merismopedia	92
	5. Peridinium	31
	Other genera	139
	Total	616
11/10/73	1. Lyngbya	398
	2. Asterionella	121
	3. Melosira	86
	4. Ankistrodesmus	69
	5. Microcystis	35
	Other genera	119
	Total	828

2. Chlorophyll a -

Sampling Date	Station Number	Chlorophyll a (ug/l)
06/28/73	01	2.0
	02	5.7
	03	2.8
09/18/73	01	2.4
	02	3.7
	03	3.0
11/10/73	01	1.6
	02	1.3
	03	2.1

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.008	0.094	0.1
0.010 P	0.018	0.094	0.2
0.020 P	0.028	0.094	1.3
0.050 P	0.058	0.094	1.7
0.025 P + 0.5 N	0.033	0.594	7.8
0.050 P + 1.0 N	0.058	1.094	18.7
1.0 N	0.008	1.094	0.1

2. Filtered and nutrient spiked -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.004	0.088	0.1
0.010 P	0.014	0.088	0.3
0.020 P	0.024	0.088	1.3
0.050 P	0.054	0.088	1.2
0.025 P + 0.5 N	0.029	0.588	7.4
0.050 P + 1.0 N	0.054	1.088	15.6
1.0 N	0.004	1.088	0.1

3. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that the potential primary productivity of Burton Lake was low at the time the assay sample was collected (06/28/73). Increasing algal yields with increasing concentrations of orthophosphorus indicate that Burton Lake was limited by phosphorus at that time. Note that the addition of only nitrogen did not result in an increased yield.

The lake data obtained in June and September indicate phosphorus limitation at those times also. On both occasions, the mean inorganic nitrogen to orthophosphorus ratios were 18 to 1 or greater, and phosphorus limitation would be expected.

IV. NUTRIENT LOADINGS
(See Appendix E for data)

For the determination of nutrient loadings, the Georgia National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v), except for the high runoff months of January and February when two samples were collected. Sampling was begun in March, 1973, and was completed in February, 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the Georgia District Office of the U.S. Geological Survey for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were determined by using a modification of a U.S. Geological Survey computer program for calculating stream loadings*. Nutrient loads shown are those measured minus point-source loads, if any.

Nutrient loadings for unsampled "minor tributaries and immediate drainage" ("ZZ" of U.S.G.S.) were estimated using the means of the nutrient loads, in $kg/km^2/year$, at stations B-1, D-1, E-1, and F-1 and multiplying the means by the ZZ area in km^2.

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* See Working Paper No. 175.

A. Waste Sources†:

1. Known municipal - None

2. Known industrial -

Name	Treatment	Mean flow (m^3/day)	Receiving Water
Burton Lake State Fish Hatchery	unknown	unknown	Moccasin Creek

† Anonymous,. 1972.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/ yr	% of total
a. Tributaries (non-point load) -		
Tallulah River	2,090	46.9
Wildcat Creek	135	3.0
Moccasin Creek	310	7.0
Dicks Creek	165	3.7
Popcorn Creek	125	2.8
Timpson Creek	700	15.7
b. Minor tributaries & immediate drainage (non-point load) -	520	11.7
c. Known municipal STP's - None	-	-
d. Septic tanks* -	215	4.8
e. Known industrial -		
Burton Lake State Fish Hatchery	unknown	-
f. Direct precipitation** -	195	4.4
Total	4,455	100.0

2. Outputs -

Lake outlet - Tallulah River 2,005

3. Net annual P accumulation - 2,450 kg.

* Estimate based on 698 seasonal and 40 permanent lakeside residences; see Working Paper No. 175.
** See Working Paper No. 175.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	kg N/yr	% of total
a. Tributaries (non-point load) -		
Tallulah River	84,475	50.7
Wildcat Creek	6,835	4.1
Moccasin Creek	9,430	5.7
Dicks Creek	6,020	3.6
Popcorn Creek	5,215	3.1
Timpson Creek	16,595	10.0
b. Minor tributaries & immediate drainage (non-point load) -	17,805	10.6
c. Known municipal STP's - None	-	-
d. Septic tanks* -	8,120	4.9
e. Known industrial -		
Burton Lake State Fish Hatchery	unknown	-
f. Direct precipitation** -	12,125	7.3
Total	166,620	100.0

2. Outputs -

Lake outlet - Tallulah River 108,855 kg.

3. Net annual N accumulation - 57,765 kg.

* Estimate based on 698 seasonal and 40 permanent lakeside residences; see Working Paper No. 175.
** See Working Paper No. 175.

D. Mean Annual Non-point Nutrient Export by Subdrainage Area:

Tributary	kg P/km²/yr	kg N/km²/yr
Tallulah River	14	572
Wildcat Creek	8	425
Moccasin Creek	15	456
Dicks Creek	9	336
Popcorn Creek	8	348
Timpson Creek	25	599

E. Yearly Loading Rates:

In the following table, the existing phosphorus loading rates are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974). Essentially, his "dangerous" rate is the rate at which the receiving water would become eutrophic or remain eutrophic; his "permissible" rate is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic rate would be considered one between "dangerous" and "permissible".

Note that Vollenweider's model may not be applicable to water bodies with short hydraulic retention times.

	Total Phosphorus		Total Nitrogen	
	Total	Accumulated	Total	Accumulated
grams/m²/yr	0.40	0.22	14.8	5.1

Vollenweider loading rates for phosphorus (g/m²/yr) based on mean depth and mean hydraulic retention time of Burton Lake:

"Dangerous" (eutrophic rate)	1.00
"Permissible" (oligotrophic rate)	0.50

V. LITERATURE REVIEWED

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VII. APPENDICES

APPENDIX A

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX B

LAKE RANKINGS

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	1316	BLUE RIDGE LAKE	524
2	1318	BURTON LAKE	523
3	1303	CHATUGE LAKE	424
4	1311	NOTTELY RESERVOIR	393
5	1310	LAKE SIDNEY LANIER	385
6	1304	CLARK HILL RESERVOIR	309
7	1301	ALLATOONA RESERVOIR	286
8	1302	BLACKSHEAR LAKE	284
9	1313	SINCLAIR LAKE	254
10	1312	LAKE SEMINOLE	253
11	1319	HIGH FALLS LAKE	192
12	1314	LAKE EUFAULA	184
13	1309	JACKSON LAKE	116
14	1317	LAKE HARDING	77

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WIT.. HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS P	INDEX NO
1301	ALLATOONA RESERVOIR	62 (8)	54 (7)	46 (6)	31 (4)	31 (0)	62 (7)	286
1302	BLACKSHEAR LAKE	38 (5)	31 (4)	0 (0)	100 (13)	100 (13)	15 (2)	284
1303	CHATUGE LAKE	85 (11)	85 (11)	92 (12)	69 (9)	31 (0)	62 (7)	424
1304	CLARK HILL RESERVOIR	54 (7)	62 (8)	62 (8)	54 (7)	31 (0)	46 (6)	309
1309	JACKSON LAKE	8 (1)	8 (1)	15 (2)	8 (1)	69 (9)	8 (1)	116
1310	LAKE SIDNEY LANIER	69 (9)	46 (6)	77 (10)	77 (10)	31 (0)	85 (10)	385
1311	NOTTELY RESERVOIR	77 (10)	69 (9)	69 (9)	62 (8)	31 (0)	85 (10)	393
1312	LAKE SEMINOLE	31 (4)	15 (2)	38 (5)	46 (6)	92 (12)	31 (4)	253
1313	SINCLAIR LAKE	46 (6)	38 (5)	54 (7)	23 (3)	31 (0)	62 (7)	254
1314	LAKE EUFAULA	15 (2)	23 (3)	31 (4)	15 (2)	77 (10)	23 (3)	184
1316	BLUE RIDGE LAKE	92 (12)	92 (12)	85 (11)	85 (11)	85 (11)	85 (10)	524
1317	LAKE HARDING	0 (0)	0 (0)	8 (1)	38 (5)	31 (0)	0 (0)	77
1318	BURTON LAKE	100 (13)	100 (13)	100 (13)	92 (12)	31 (0)	100 (13)	523
1319	HIGH FALLS LAKE	23 (3)	77 (10)	23 (3)	0 (0)	31 (0)	38 (5)	192

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS P
1301	ALLATOONA RESERVOIR	0.020	0.150	443.167	7.489	14.900	0.005
1302	BLACKSHEAR LAKE	0.035	0.250	468.091	1.856	11.700	0.014
1303	CHATUGE LAKE	0.014	0.110	382.778	6.339	14.900	0.005
1304	CLARK HILL RESERVOIR	0.024	0.150	439.250	6.715	14.900	0.007
1309	JACKSON LAKE	0.094	0.530	461.385	14.577	14.500	0.027
1310	LAKE SIDNEY LANIER	0.016	0.180	396.417	5.431	14.900	0.004
1311	NOTTELY RESERVOIR	0.015	0.130	405.667	6.656	14.900	0.004
1312	LAKE SEMINOLE	0.040	0.405	456.133	6.760	11.800	0.010
1313	SINCLAIR LAKE	0.028	0.230	440.667	8.806	14.900	0.005
1314	LAKE EUFAULA	0.048	0.345	457.667	9.883	14.400	0.011
1316	BLUE RIDGE LAKE	0.010	0.105	394.889	3.078	13.000	0.004
1317	LAKE HARDING	0.114	0.640	467.538	7.438	14.900	0.045
1318	BURTON LAKE	0.007	0.100	363.889	2.733	14.900	0.003
1319	HIGH FALLS LAKE	0.047	0.115	459.444	15.075	14.900	0.009

APPENDIX C

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR GEORGIA 12/2/75

LAKE CODE 1318 LAKE BURTON

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 297.8

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1318A1	147.6	6.51	7.65	7.93	7.50	5.52	4.11	3.62	3.54	2.97	2.83	3.86	4.59	4.90
1318A2	297.8	8.41	7.16	5.95	9.86	10.96	9.60	7.76	9.83	10.42	12.94	12.32	11.41	9.98
1318B1	16.1	0.57	0.71	0.79	0.76	0.59	0.54	0.51	0.42	0.48	0.37	0.48	0.51	0.58
1318C1	28.7	0.74	0.91	0.96	0.96	0.74	0.65	0.62	0.54	0.48	0.48	0.51	0.62	0.68
1318D1	17.9	0.62	0.76	0.85	0.82	0.65	0.57	0.57	0.45	0.42	0.48	0.45	0.57	0.59
1318E1	15.8	0.54	0.65	0.71	0.71	0.54	0.48	0.45	0.48	0.37	0.34	0.37	0.48	0.58
1318F1	27.7	0.96	1.19	1.38	1.27	0.99	0.88	0.85	0.71	0.65	0.62	0.68	0.85	0.91
1318Z2	41.7	1.39	1.73	1.98	1.84	1.44	1.27	1.25	1.02	0.93	0.91	0.99	1.25	1.32

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 297.8
SUM OF SUB-DRAINAGE AREAS = 286.7

TOTAL FLOW IN = 114.82
TOTAL FLOW OUT = 114.82

NOTE *** LAKE AREA=4.3 SQ MI, NOT INCLUDED IN SUM OF SUB-DRAINAGE AREAS

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
1318A1	3	73	12.97	11	12.74				
	4	73	10.62	16	7.53				
	5	73	13.17	16	7.67				
	6	73	9.66	17	9.91				
	7	73	5.87	15	6.03				
	8	73	4.45	5	3.45				
	9	73	2.86	9	2.78				
	10	73	2.32	7	2.41				
	11	73	3.88	11	1.84				
	12	73	9.94	17	3.68				
	1	74	12.63	6	12.66	21	13.88		
	2	74	12.28	3	21.78	21	9.63		
1318A2	3	73	23.62	11	0.0				
	4	73	17.67	16	13.65				
	5	73	23.78	16	19.65				
	6	73	19.71	17	0.0				
	7	73	17.05	15	0.0				
	8	73	8.64	5	0.0				
	9	73	7.39	9	0.0				
	10	73	8.83	7	0.0				
	11	73	13.31	11	7.67				
	12	73	14.65	17	19.74				
	1	74	28.44	6	6.82	21	16.25		
	2	74	22.09	3	17.84	21	19.74		

TRIBUTARY FLOW INFORMATION FOR GEORGIA 12/2/75

LAKE CODE 1318 LAKE BURTON

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
1318B1	3	73	1.42	11	1.25				
	4	73	1.16	16	0.82				
	5	73	1.44	16	0.85				
	6	73	1.85	17	1.02				
	7	73	0.54	15	0.71				
	8	73	0.48	5	0.45				
	9	73	0.31	9	0.37				
	10	73	0.34	7	0.34				
	11	73	0.48	11	0.28				
	12	73	1.02	17	0.48				
	1	74	1.10	6	1.25	16	1.27		
	2	74	1.13	3	1.87	21	0.93		
1318C1	3	73	1.81	11	1.90				
	4	73	1.50	16	1.05				
	5	73	1.84	16	1.10				
	6	73	1.36	17	1.44				
	7	73	0.71	15	0.85				
	8	73	0.62	5	0.48				
	9	73	0.40	9	0.40				
	10	73	0.31	7	0.31				
	11	73	0.54	11	0.23				
	12	73	1.44	17	0.54				
	1	74	1.42	6	1.90	21	1.93		
	2	74	1.44	3	3.34	21	1.88		
1318D1	3	73	1.56	11	1.59				
	4	73	1.27	16	0.91				
	5	73	1.59	16	0.93				
	6	73	1.16	17	1.22				
	7	73	0.62	15	0.74				
	8	73	0.54	5	0.42				
	9	73	0.34	9	0.34				
	10	73	0.28	7	0.28				
	11	73	0.45	11	0.20				
	12	73	1.22	17	0.45				
	1	74	1.22	6	1.59	21	1.61		
	2	74	1.22	3	2.72	21	1.88		
1318E1	3	73	1.33	11	1.30				
	4	73	1.08	16	0.79				
	5	73	1.33	16	0.79				
	6	73	0.99	17	1.02				
	7	73	0.51	15	0.65				
	8	73	0.45	5	0.40				
	9	73	0.28	9	0.31				
	10	73	0.25	7	0.28				
	11	73	0.42	11	0.20				
	12	73	1.02	17	0.42				
	1	74	1.05	6	1.30	21	1.33		
	2	74	1.05	3	2.15	21	0.93		

TRIBUTARY FLOW INFORMATION FOR GEORGIA 12/2/75

LAKE CODE 1318 LAKE BURTON

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
1318F1	3	73	2.44	11	2.38				
	4	73	1.98	16	1.42				
	5	73	2.46	16	1.47				
	6	73	1.81	17	1.87				
	7	73	0.96	15	1.13				
	8	73	0.85	5	0.65				
	9	73	0.54	9	0.54				
	10	73	0.45	7	0.45				
	11	73	0.74	11	0.34				
	12	73	1.87	17	0.74				
	1	74	1.87	6	2.38	21	2.49		
	2	74	1.90	3	4.13	26	1.84		
1318ZZ	3	73	3.65						
	4	73	3.80						
	5	73	3.71						
	6	73	2.72						
	7	73	1.42						
	8	73	1.25						
	9	73	0.79						
	10	73	0.74						
	11	73	1.19						
	12	73	2.83						
	1	74	2.69						
	2	74	2.78						

APPENDIX D

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 74/11/26

131801
35 48 05.0 083 32 10.0
BURTON LAKE
13241 GEORGIA

11EPALES
3

2111202
0105 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/28	16 40	0000	26.6		126	50K	7.00	10	0.100	0.600	0.070	0.004
	16 40	0005	26.2	8.4		50K	6.90	10K	0.060	0.500	0.040	0.003
	16 40	0010	23.9	9.7		50K	7.10	10K	0.060	0.300	0.040	0.00[illegible]
	16 40	0015	21.1	8.8		50K	6.80	10K	0.060	0.300	0.050	0.002
	16 40	0040	16.7	6.8		50K	6.40	10K	0.070	0.300	0.080	0.002
	16 40	0080	13.6	7.0		50K	6.40	10K	0.080	0.400	0.070	0.002
	16 40	0100	12.8	2.4		50K	6.30	13	0.170	0.300	0.060	0.002K
73/09/18	11 25	0000	24.5		118	15	7.10	10K	0.050	0.800	0.025	0.006
	11 25	0026	24.4	6.2		16	6.30	10K	0.040	0.500	0.030	0.009
	11 25	0030	21.7	3.2		18	5.60	10K	0.040	0.400	0.030	0.007
	11 25	0045	18.6	2.8		15	5.40	10K	0.040	0.300	0.030	0.007
	11 25	0060	16.8	2.8		14	5.30	10K	0.040	0.200	0.050	0.004
	11 25	0075	15.9	2.4		15	5.30	10K	0.040	0.200K	0.100	0.004
	11 25	0090	15.2	0.1		24	5.70	10K	0.200	0.500	0.040	0.004
73/11/10	14 30	0000	15.9		216	20	6.40	10K	0.050	0.200K	0.020	
	14 30	0010	15.5	8.0		18	6.40	10K	0.050	0.200K	0.020	
	14 30	0030	15.5	7.6		19	6.40	10K	0.040	0.200K	0.020	
	14 30	0060	15.4	7.8		18	6.30	10K	0.060	0.200K	0.020	
	14 30	0084	15.3	7.6		19	6.40	10K	0.060	0.200K	0.020	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

131801
35 44 05.0 083 32 10.0
BURTON LAKE
13241 GEORGIA

11EPALES 2111202
3 0105 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/28	16 40	0000	0.009	2.0
	16 40	0005	0.007	
	16 40	0010	0.008	
	16 40	0015	0.010	
	16 40	0040	0.010	
	16 40	0080	0.006	
	16 40	0100	0.006	
73/09/18	11 25	0000	0.006	2.4
	11 25	0020	0.011	
	11 25	0030	0.009	
	11 25	0045	0.009	
	11 25	0060	0.009	
	11 25	0075	0.007	
	11 25	0090	0.004	
73/11/10	14 30	0000	0.005	1.6
	14 30	0010	0.005	
	14 30	0030	0.007	
	14 30	0060	0.006	
	14 30	0094	0.006	

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STORET RETRIEVAL DATE 74/11/26

131602
35 51 10.0 083 32 05.0
BURTON LAKE
13241 GEORGIA

11EPALES
3

2111202
0051 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/20	17 30	0000	27.0		97	50K	7.10	10K	0.070	0.300	0.040	[illegible]
	17 30	0010	26.0	8.9		50K	7.10	10K	0.060	[illegible]	0.040	[illegible]
	17 30	0017	21.6	8.2		50K	6.50	10	0.060	0.400	[illegible]	[illegible]
	17 30	0030	18.1	5.7		50K	6.30	11	0.060	0.200K	0.060	[illegible]
	17 30	0047	16.2	2.1		50K	6.30	10K	0.110	0.200K	0.060	[illegible]
73/09/18	12 15	0000	24.4	7.8	112	16	6.50	10K	0.040	0.300	[illegible]	[illegible]
	12 15	0015	24.2	7.4		15	6.20	10K	0.040	0.300	0.040	[illegible]
	12 15	0025	22.2	4.8		16	5.70	10K	0.060	0.400	0.040	[illegible]
	12 15	0038	19.6	0.4		18	5.70	10K	0.130	0.400	0.030	0.004
73/11/10	14 55	0000	15.7		144	18	6.40	10	0.060	0.300	0.030	
	14 55	0010	15.4	7.6		17	6.50	10K	0.040	0.200K	0.020	
	14 55	0025	15.2	8.0		18	6.30	10K	0.050	0.200K	0.020	
	14 55	0042	15.2	8.2		17	6.30	10K	0.040	0.200K	0.030	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

131802
35 51 10.0 083 32 05.0
BURTON LAKE
13241 GEORGIA

11EPALES 2111202
3 0151 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/28	17 30	0000	0.007	5.7
	17 30	0010	0.009	
	17 30	0017	0.009	
	17 30	0030	0.009	
	17 30	0047	0.014	
73/09/18	12 15	0000	0.005	3.7
	12 15	0015	0.006	
	12 15	0025	0.024	
	12 15	0038	0.006	
73/11/10	14 55	0000	0.007	1.3
	14 55	0010	0.006	
	14 55	0025	0.007	
	14 55	0042	0.007	

STORET RETRIEVAL DATE 74/11/26

131803
35 51 20.0 083 33 00.0
BURTON LAKE
13241 GEORGIA

11EPALES
3

2111202
0055 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/28	18	05 0000	26.7		106	50K	7.10	10K	0.060	0.200	0.050	0.003
	18	05 0010	26.5	10.1		50K	7.10	10K	0.060	0.200K	0.050	0.002K
	18	05 0017	25.4	8.2		50K	6.50	10K	0.070	0.200K	0.050	0.002
	18	05 0035	17.3	7.2		50K	6.50	10K	0.060	0.200K	0.070	0.002
	18	05 0050	15.8	6.8		50K	6.40	10K	0.080	0.200K	0.080	0.002
73/09/18	12	50 0000	24.4	8.0	110	16	6.30	10K	0.040	0.200	0.030	0.005
	12	50 0015	24.1	7.6		16	6.10	10K	0.040	0.200K	0.030	0.008
	12	50 0030	21.0	4.2		17	5.90	10K	0.070	0.200K	0.060	0.004
	12	50 0050	17.4	0.6		20	5.80	13	0.170	0.300	0.050	0.004
73/11/10	15	15 0000	15.6		196	18	6.30	11	0.050	0.200K	0.020	
	15	15 0010	15.1	7.2		18	6.50	10K	0.040	0.200K	0.020	
	15	15 0025	14.9	8.4		18	6.40	10K	0.040	0.200K	0.020	
	15	15 0048	14.7	8.4		17	6.50	10K	0.040	0.200K	0.020	

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

131803
35 51 20.0 083 33 00.0
BURTON LAKE
13241 GEORGIA

11EPALES 2111202
3 0055 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/28	18 05	0000	0.007	2.8
	18 05	0010	0.007	
	18 05	0017	0.009	
	18 05	0035	0.009	
	18 05	0050	0.009	
73/09/18	12 50	0000	0.008	3.0
	12 50	0015	0.011	
	12 50	0030	0.007	
	12 50	0050	0.015	
73/11/10	15 15	0000	0.006	2.1
	15 15	0010	0.010	
	15 15	0025	0.005	
	15 15	0048	0.008	

APPENDIX E

TRIBUTARY DATA

STORET RETRIEVAL DATE 75/12/02

1318A1 1318A1
34 53 30.0 083 32 00.0
TALLULAH RIVER
13145 RABUN CO HWY MAP
1/LAKE BURTON
TALLULAH RIVER RD N END OF LAKE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/11	12 25		0.042	1.100	0.115	0.005K	0.010
73/04/16	12 15		0.039	1.000	0.039	0.005K	0.005K
73/05/16	11 40		0.010K	0.100K	0.007	0.005K	0.005K
73/06/17	11 34		0.013	0.150	0.021	0.005K	0.005K
73/07/15	11 50		0.063	0.200	0.014	0.008	0.020
73/08/05	11 35		0.066	0.100K	0.016	0.015	0.015
73/09/09	09 45		0.056	0.810	0.097	0.005K	0.030
73/10/07	12 00		0.034	0.100K	0.014	0.010	0.015
73/11/11	10 30		0.046	0.400	0.018	0.005K	0.005K
73/12/17	14 00		0.168	0.100K	0.008	0.005K	0.005
74/01/06	12 37		0.040	1.000	0.005	0.005	0.010
74/01/21	14 30		0.048	0.900	0.040	0.010	0.010
74/02/03	11 00		0.060	1.200	0.035	0.005	0.055
74/02/21	13 35		0.040	0.100K	0.010	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/12/02

1318A2 1318A2
34 47 30.0 083 32 30.0
TALLULAH
13 RABUN CO HWY MAP
O/LAKE BURTON
ST RT S 880 BRDG BELO DAM S END OF LAKE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/11	14 30		0.040	1.260	0.077	0.005K	0.005K
73/04/16	14 05		0.032	0.780	0.030	0.005K	0.005K
73/05/16	13 15		0.017	0.170	0.007	0.005K	0.005K
73/06/17	12 20		0.026	0.100K	0.042	0.005K	0.005K
73/07/15	13 00		0.132	0.360	0.061	0.006	0.006
73/08/05	12 45		0.056	0.170	0.080	0.006	0.010
73/09/09	11 30		0.046	1.000	0.460	0.005K	0.005K
73/10/07	11 15		0.030	0.200	0.131	0.007	0.007
73/11/11	13 30		0.016	0.100K	0.030	0.005K	0.005K
73/12/17	15 10		0.112	0.200	0.028	0.005K	0.010
74/01/06	13 06		0.044	0.100K	0.035	0.005K	0.015
74/01/21	16 15		0.020	0.100K	0.025	0.005	0.007
74/02/03	11 45		0.064	0.200	0.025	0.005K	0.010
74/02/21	14 15		0.048	0.100K	0.045	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/12/02

131881 131881
34 49 30.0 083 35 30.0
WILDCAT CREEK
13 RABUN CO HWY MAP
T/LAKE BURTON
/HWY 197 BRDG N OF LA PRADES CAMP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/11	10 40		0.023	2.050	0.088	0.005K	0.010
73/04/16	10 45		0.010K	0.690	0.030	0.005K	0.005K
73/05/16	10 00		0.010K	0.100K	0.011	0.005K	0.005K
73/06/17	10 10		0.010K	0.100K	0.014	0.005K	0.010
73/07/15	11 00		0.031	0.160	0.019	0.008	0.015
73/08/05	10 45		0.010K	0.100K	0.011	0.006	0.012
73/09/09	08 45		0.011	0.910	0.520	0.005K	0.010
73/10/07	12 50		0.010K	0.100K	0.021	0.008	0.008
73/11/11	09 40		0.011	0.450	0.020	0.005K	0.005K
73/12/17	13 20		0.064	0.100K	0.016	0.005K	0.005K
74/01/06	11 20		0.008	0.400	0.015	0.005K	0.005
74/01/16	13 00		0.016	0.100K	0.020	0.005	0.005K
74/02/03	10 00		0.020	0.300	0.082	0.005K	0.015
74/02/21	12 20		0.016	0.100K	0.010	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/12/02

1318C1 1318C1
34 50 30.0 083 35 30.0
MOCCASIN CREEK
13 RABUN CO HWY MAP
T/LAKE BURTON
BANK BELO LK BURTON ST FISH HATCHERY
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/11	11 00		0.021	0.740	0.039	0.005K	0.015
73/04/16	10 50		0.013	1.400	0.073	0.012	0.020
73/05/16	10 10		0.010K	0.100K	0.028	0.005K	0.010
73/06/17	10 20		0.011	0.100K	0.034	0.005K	0.015
73/07/15	11 05		0.024	0.280	0.067	0.010	0.015
73/08/05	10 50		0.017	0.100K	0.038	0.010	0.020
73/09/09	09 00		0.018	1.540	0.120	0.017	0.030
73/10/07	12 45		0.016	0.662	0.098	0.021	0.022
73/11/11	09 45		0.025	0.250	0.091	0.032	0.035
73/12/17	13 25		0.048	0.100K	0.012	0.005K	0.005K
74/01/06	11 45		0.004	0.100K	0.015	0.005K	0.005
74/01/21	13 35		0.004	0.600	0.025	0.010	0.010
74/02/03	10 10		0.028	0.100K	0.015	0.005K	0.005
74/02/21	12 35		0.016	0.200	0.010	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/12/02

131801 131801
34 51 30.0 083 35 00.0
DICKS CREEK
13 RABUN CO HWY MAP
T/LAKE BURTON
ST RD 874 BRDG 1 MI N LK BURTON HATCHERY
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/11	11 15		0.014	1.000	0.081	0.005K	0.015
73/04/16	11 05		0.010K	0.100K	0.011	0.005K	0.005K
73/05/16	10 30		0.010K	0.100K	0.005K	0.005K	0.005K
73/06/17	10 40		0.010K	0.100K	0.010		0.010
73/07/15	11 12		0.024	0.150	0.024	0.008	0.010
73/08/05	11 00		0.010K	0.100K	0.008	0.005K	0.010
73/09/09	09 10		0.010K	0.630	0.280	0.005K	0.005K
73/10/07	12 35		0.010K	0.450	0.067	0.008	0.025
73/11/11	10 00		0.010K	0.350	0.019	0.005K	0.005K
73/12/17	13 30		0.004	0.100K	0.005K	0.005K	0.005K
74/01/06	12 05		0.004	0.100K	0.015	0.005K	0.005
74/01/21	13 50		0.024	0.400	0.020	0.005K	0.005K
74/02/03	10 20		0.008	0.150	0.020	0.005K	0.020
74/02/21	12 41		0.008	0.100K	0.010	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/12/02

1318E1 1318E1
34 53 00.0 083 33 00.0
POPCORN CREEK
13 RABUN CO HWY MAP
T/LAKE BURTON
BANK ABOVE CONFLUENCE WITH LAKE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/11	12 00		0.014	1.470	0.081	0.005K	0.010
73/04/16	11 35		0.010K	0.280	0.017	0.005K	0.010
73/05/16	11 00		0.010K	0.100K	0.005K	0.005K	0.005K
73/06/17	11 08		0.010K	0.100K	0.014	0.005K	0.010
73/07/15	11 30		0.023	0.180	0.013	0.005	0.010
73/08/05	11 20		0.010K	0.100K	0.006	0.005K	0.005K
73/09/09	09 30		0.013	1.300	0.670	0.005K	0.005K
73/10/07	12 20		0.010K	0.150	0.050	0.009	0.010
73/11/11	10 10		0.010K	0.100K	0.014	0.005K	0.005K
73/12/17	13 45		0.020	0.300	0.008	0.005K	0.005K
74/01/06	12 15		0.004	0.100K	0.010	0.005K	0.010
74/01/21	14 10		0.016	0.300	0.040	0.005	0.005K
74/02/03	10 40		0.008	0.200	0.050	0.005K	0.020
74/02/21	13 05		0.004	0.100K	0.010	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/12/02

1318F1 1318F1
34 51 30.0 083 30 30.0
TIMPSON CREEK
13 RABUN CO HWY MAP
T/LAKE BURTON
BITUMINOUS RD BRDG .2 MI S JCT HWY 76
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/11	12 50		0.088	3.570	0.093	0.005K	0.030
73/04/16	12 40		0.038	0.180	0.008	0.005K	0.020
73/05/16	12 50		0.029	0.100K	0.005K	0.005K	0.015
73/06/17	12 01		0.046	0.100K	0.008	0.005K	0.020
73/07/15	12 40		0.092	0.245	0.015	0.015	0.040
73/08/05	12 30		0.046	0.100K	0.006	0.006	0.020
73/09/09	11 30		0.031	1.000	0.460	0.005K	0.020
73/10/07	11 30		0.042	0.750	0.072	0.009	0.020
73/11/11	11 10		0.020	0.100K	0.018	0.005K	0.005K
73/12/17	15 30		0.036	0.100K	0.012	0.005K	0.010
74/01/06	12 50		0.084	0.100K	0.010	0.005K	0.020
74/01/21	14 50		0.052	1.100	0.050	0.010	0.025
74/02/03	11 20		0.068	0.100	0.015	0.005	0.065
74/02/26	14 00		0.100	0.300	0.030	0.010	0.050

K VALUE KNOWN TO BE
LESS THAN INDICATED